

# Claims

- [c1] An insertable temperature probe device for use in measuring temperature of fluid in a conduit, said probe device including:
- a temperature sensor device with a sensing element, a portion of the sensor device is adapted to transmit a signal indicative of the temperature of fluid in a conduit;
  - a carrier for insertion into a flow stream in the conduit, at least a portion of the sensor device carried by the carrier and is removably mounted within the carrier and sealed thereto said carrier being selectively movable between extended and retracted positions when the probe device is mounted to the conduit, the sensing element is contained within the carrier;
  - at least one member associated with the carrier to limit the selective movement of the carrier;
  - means for mounting the probe device on the conduit through which a fluid flows; and
  - a flow director carried by the carrier and operable to direct fluid outside the carrier to flow directly onto at least one of the sensing element and sensor device.
- [c2] A probe device as set forth in claim 1 wherein the sens-

ing element is completely within a portion of the carrier.

- [c3] A probe device as set forth in claim 2 wherein the sensing element includes a thermocouple.
- [c4] A probe device as set forth in claim 1 wherein the carrier includes a rod with a tubular sidewall defining a bore, said sensing element is positioned within the bore and has a fluid flow path formed therearound by an interior surface of the tubular side wall, said flow director includes a first opening in said sidewall and opens into the bore for directing a portion of the fluid flow from a main flow stream of fluid for flow around a portion of at least one of the sensor device and the sensing element.
- [c5] A probe device as set forth in claim 4 wherein the first opening is positioned on the rod to face generally upstream in the conduit.
- [c6] A probe device as set forth in claim 5 includes a second opening in the sidewall of the rod generally opposite the first opening and opens into the bore, said second opening to face generally downstream in the conduit.
- [c7] A probe device as set forth in claim 6 wherein the first and second openings are generally in line and aligned generally in the direction of flow of fluid in the conduit.

[c8] A probe device as set forth in claim 4 wherein the sensing element includes a temperature sensor.